CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 90-051

UPDATED WASTE DISCHARGE REQUIREMENTS AND RESCISSION OF ORDER NOS. 79-21 AND 84-7 FOR:

OAKLAND SCAVENGER COMPANY
DURHAM ROAD CLASS III LANDFILL
FREMONT, ALAMEDA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board) finds that:

1. Oakland Scavenger Company (hereinafter called the discharger) is a wholly owned subsidiary of Waste Management of North America, Inc. Oakland Scavenger Company operates a municipal refuse disposal site located at the west end of Durham Road in the City of Fremont as shown on Attachment A. The Board reserves the right to name Waste Management of North America, Inc. as a waste discharger at a future date, if necessary.

2. The Board adopted Waste Discharge Requirements for the site as Order No. 79-21 on February 20, 1979 and revised the Order as Order No.84-7 on January 18, 1984. Updating of these Requirements is necessary pursuant to Title 23, Chapter 3 Subchapter 15 of the California Code of Regulations (hereinafter Subchapter 15).

3. The discharger submitted a Report of Waste Discharge (ROWD) on December 1, 1987 for the purpose of updated Waste Discharge Requirements. An addendum to the ROWD was submitted on March 1, 1988. Collectively these two submittals constitute a ROWD for the site. The ROWD contains an Operations Plan and a Draft Closure Plan for the existing landfill. A Final Closure Plan for the existing landfill was submitted in January of 1989. The Operations Plan and this Final Closure Plan are hereby incorporated as part of this Order. The Closure Plan states that the landfill is permitted by the City of Fremont for a final fill height of 103 feet.

4. The discharger currently operates on about 108 acres (called the existing landfill) of their 378 acre site (called the site). The discharger estimates that the existing landfill will reach capacity in the year 1993 or early 1994.

5. The existing landfill began operations in 1967 in accordance with accepted practices of the time. The existing landfill was initially developed by removal of the top soil down to the water table (approximately 1 to 3 feet). Refuse was then placed and compacted in this excavation which constitutes the base of the landfill. Because several feet of refuse at the existing landfill is currently below the elevation of the shallow ground water, the site does not meet the siting criteria for a Class 3 landfill as specified in Section 2530(c) of Subchapter 15.

The Board finds it infeasible for the siting criteria specified in Section 2530(c) of Subchapter 15, regarding 5 foot separation of wastes and the highest anticipated elevation of ground water, to be met for the existing landfill area. The discharger is required to submit a specific engineered alternative pursuant to Section 2510(b), of Subchapter 15, which is consistent with the performance goals of Article 3, Subchapter 15 and which affords equivalent water quality protection.

6. The discharger has proposed development of an additional 117 acres of the site (called the expansion landfill) for disposal of municipal refuse and incinerator ash from a proposed energy/resource recovery facility (as shown on Attachment A). The California Department of Health Services, Hazardous Waste Management Branch has determined that the ash from the proposed incineration facility is not a hazardous waste. This 117 acres includes an area designated as the Corporation Yard. The discharger proposes to construct the expansion landfill in accordance with the siting requirements specified in Section 2530(c) of Subchapter 15, regarding 5 foot separation of wastes and the highest anticipated elevation of ground water. A detailed workplan proposal for construction, operation and closure of the expansion landfill has a scheduled completion date of October 1, 1990.

7. The site is immediately underlain by a 10 to 20 foot layer of Younger Bay Mud, beneath which exists a 14 to 40 foot layer of Older Bay Mud. The younger bay mud is a heterogeneous mixture of clays and silts containing discontinuous sand lenses. The permeability of the Older Bay Mud ranges from approximately 1 x 10-6 to 1 x 10-7 cm/sec. The Bay Mud is underlain by the Newark Aquifer.

   Perched ground water is present at depths of 3 to 15 feet in sand lenses within the Younger Bay Mud. The perched ground water may be contiguous with San Francisco Bay. Sand lenses are less common in the Older Bay Mud. The Newark Aquifer is a confined aquifer in this area, under significant piezometric pressure. Mowry Slough and Albrae Slough are within a quarter mile of the site, and the Alameda County Flood Channel defines the northwestern boundary of the site.

   Historically, the shallow groundwater was used as domestic supply water in an area known as Drawbridge, approximately 2 miles south of the site. Due to salt water intrusion, the western portion of the Newark Aquifer (which includes the Newark Aquifer underlying the site) is not potable. The Alameda County Water District has an existing Aquifer Reclamation Program and is developing a salt water intrusion barrier project, in order to reclaim and protect the quality of the ground water to the north and east of the landfill. Ground water extraction wells along the Southern Pacific Railroad track (NNW of the landfill site) will be used to create an hydraulic barrier by removing saline water and establishing a freshwater flow in a southwesterly direction (see Attachment A). Once the design plans for the salinity barrier project are finalized, the discharger will need to determine what influences the Alameda County Water District's salt water intrusion barrier project will have on the subsurface hydrology at the site and re-evaluate the adequacy of the existing self monitoring plan.

8. The discharger performed extensive hydrogeologic investigations during 1989 for the purpose of better defining site conditions and to develop an expanded ground water monitoring program. The current water quality monitoring network includes two surface water locations in the adjacent Alameda County Flood Control Channel identified as TG-1 and TG-2, and twenty two ground water monitoring wells identified as 1a, 3a, 4a, 5a, 6a, 7a, 9a, 10a, 11a, 12a, 13a, 14a, 15a, 16a, M6 and G4 screened in the water table zone, and 1c, 2c, 3c, 4c, 5c, and 6c screened in the Newark Aquifer. The accumulation and composition of leachate in the existing area is being monitored with four leachate wells identified as LW1, LW2, LW3, and LW5. Removal of an underground fuel tank and a subsequent subsurface investigation in the vicinity of the former tank have identified petroleum hydrocarbon soil and groundwater contamination in the area known as the Corporation Yard. Wastes will not be placed in this area until the petroleum hydrocarbon contamination has been satisfactorily remediated.

9. Section 13273 of the California Water Code requires that all owners of solid waste disposal sites perform a solid waste assessment test (SWAT) to determine if hazardous wastes have migrated from their site. The State Water Resources Control Board (SWRCB) has adopted a statewide ranking of sites required to perform this study. Durham Road landfill was listed on the fourth rank, and therefore, the discharger is required to submit the results of this study by July 1, 1990.

10. Land within 1000 feet of the site to the south and west is part of the San Francisco Bay National Wildlife Refuge and is used for salt evaporation ponds. Land to the north and east is undeveloped area.

11. The United States Army Corp of Engineers has determined that the proposed 117 acre landfill expansion does not include wetland areas. However, the Army Corp of Engineers has identified wetland habitat on a portion of the site which is not proposed for development.

12. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin on December 17, 1986, and this order implements the water quality objectives of that Basin Plan.

13. The existing and potential beneficial uses of Mowry Slough, Albrae Slough and San Francisco Bay are:

    Water Contact Recreation
    Water Non-contact Recreation
    Commercial and Sports Fishing
    Navigation
    Wildlife Habitat
    Presevation of Rare and Endangered Species
    Fish Migration
    Fish Spawning

14. The existing and potential beneficial uses of the Newark Aquifer north and east of the site are:

    Municipal Water Supply
    Industrial Process Water

15. The existing and potential beneficial use of the Newark Aquifer at the site location is:

    Industrial Service Supply

16. The City of Fremont has approved a final Environmental Impact Report in accordance with the California Environmental Quality Act (Public Resources Code Section 2100 et. seq.). The project as approved by the City of Fremont, could cause a significant effect on the environment in that the presence of the landfill and landfill activity may degrade water quality unless appropriate mitigation measures are taken. The Prohibitions, Specifications and Provisions of this Order are intended to mitigate or avoid any adverse or potential adverse impacts.

17. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

18. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that Oakland Scavanger Company and any other persons that currently or in the future own this land or operate this facility, shall meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and shall also comply with the following:

A. <u>Prohibitions</u>

1. The disposal of waste shall not create a condition of pollution or nuisance as defined in Sections 13050(l) and 13050(m) of the California Water Code.

2. Wastes shall not be placed in any area of the site outside of the existing landfill area until the Executive Officer has approved an as built verification report regarding the construction of each section of the expansion landfill.

3. Wastes shall not be placed in or allowed to contact ponded water from any source whatsoever.

4. Wastes shall not be placed in the area known as the Corporation Yard until the discharger has received a case closure letter from the Board's Executive Officer indicating that remediation of the petroleum hydrocarbon contamination in this area has been satisfactorily completed.

5. Wastes shall not be disposed of in any position where they can be carried from the disposal site and discharged into waters of the State or of the United States.

6. Hazardous and designated wastes as defined in Sections 2521 and 2522 of Subchapter 15, and high moisture content wastes (including sewage sludge, septic tank waste, cannery waste, restaurant grease, and other wastes containing less than 50% solids), with the exception of leachate and methane gas condensate generated at the site, shall not be deposited at this site. Asbestos and infectious wastes may be deposited provided that all regulations and provisions by the California Department of Health Services and local health agencies are complied with.

7. The discharger, or any future owner or operator of this site, shall not cause the following conditions to exist in waters of the State at any place outside the waste management facility:

   a. Surface Waters

      1. Floating, suspended, or deposited macroscopic particulate matter or foam.

      2. Bottom deposits or aquatic growth.

      3. Alteration of temperature, turbidity, or apparent color beyond natural background levels.

      4. Visible, floating, suspended or deposited oil or other products of petroleum origin.

      5. Toxic or other deleterious substances to be present in concentrations or quantities which may cause deleterious effects on aquatic biota, wildlife or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentrations.

   b. Groundwater

      1. The groundwater shall not be degraded as a result of the waste disposal operation.

8. Leachate from wastes and ponded water containing leachate or in contact with refuse shall not be discharged to waters of the State or the United States.

B. SPECIFICATIONS

1. Water used during disposal operations shall be limited to a minimal amount necessary for dust control and fire supression.

2. The site shall be protected from any washout or erosion of wastes or covering material and from inundation which could occur as a result of a 100 year 24 hour precipitation event.

3. Surface drainage from tributary areas, and internal site drainage from surface and subsurface sources, shall not contact or percolate through wastes during disposal operations or during the life of the site. Drainage ditches constructed over final refuse fill will be underlain with a minimum 5-foot thickness of compacted earthfill or an equivalent protection layer. Surface drainage ditches shall be constructed to ensure that all rainwater is diverted off-site and does not contact wastes or leachate.

4. The discharger shall install and operate a leachate collection and removal system (LCRS) for both the existing and expansion landfill areas, so as to minimize the buildup of leachate in the landfill. Measures shall be taken to ensure that leachate in the leachate collection system can flow freely into any collection sump. Measures shall also be taken to assure that the LCRS will remain operational throughout the closure/post-closure maintenance period of the landfill.

5. The leachate monitoring and control system shall be designed, maintained, and operated to minimize the buildup of hydraulic head on the bottom of the landfill. This system shall be inspected weekly, and any accumulated fluid shall be removed. The discharger shall demonstrate at least annually that the leachate control systems are functioning properly.

6. A periodic load checking program shall be implemented to ensure that hazardous materials are not discharged at the landfill.

7. The discharger shall ensure that the foundation of the site, the levees surrounding the site, the refuse fill, and the structures which control leachate, surface drainage, erosion and gas for this site are constructed and maintained to withstand conditions generated during the maximum probable earthquake.

8. As portions of the landfill are closed, the exterior surfaces shall be graded to a minimum slope of three percent in order to promote lateral runoff of precipitation. In addition, all completed disposal areas shall be covered with a minimum of 4 feet of cover and meet other applicable requirements as described in Article 8 of Subchapter 15.

9. The discharger shall operate the waste management facility so as not to cause a statistically significant difference to exist between water quality at the compliance points and Water Quality Protection Standards (WQPS) to be established for the following parameters. The discharger shall establish these WQPS according to the requirements of this Order and Article 5 of Subchapter 15 within one year of adoption of this Order.

a. pH=
b. Specific Conductivity=
c. Chloride=
d. Total Organic Carbon=
e. Nitrate Nitrogen=
f. Total Kjeldahl Nitrogen=
g. Total Phenol=
h. Total Disolved Solids=
i. Arsenic=
j. Total Chromium=
k. Copper=
l. Nickel=
m. Zinc=
n. Lead=

10. The discharger shall install any additional groundwater and leachate monitoring devices required to fulfill the terms of any Self-Monitoring Program issued to the discharger in order that the Board may evaluate compliance with the conditions of this Order.

C. PROVISIONS

1. The discharger shall comply with all Prohibitions, Specifications, and Provisions of this Order immediately upon adoption of this Order.

2. The discharger shall submit and implement by July 1, 1990, a plan for monitoring horizontal and vertical deformations of all waste management units.

3. The discharger shall submit by July 1, 1990, a detailed inspection and corrective action plan to be implemented in the event of any earthquake generating ground shaking of Modified Mercalli Intensity V or greater at or near the landfill. The report shall describe the containment features, and ground water monitoring and leachate control facilities potentially impacted by the static and seismic deformations of the landfill. The plan shall provide for reporting results of the post earthquake inspection to the Board within 18 hours of the occurrence of the earthquake. In the event of any damage due to liquifaction, or other slope failure, the corrective action plan shall be implemented immediately, and the Board notified immediately.

4. The discharger shall submit a detailed leachate management plan for the existing and expansion landfill areas by August 1, 1990. This plan should evaluate the buildup of leachate within all portions of the landfill, the quantity of leachate produced, the storage of leachate, and the ultimate disposal of the leachate. The report should evaluate the quantity of leachate which will have to be extracted, to the maximum extent feasible, from the leachate collection system in order to minimize the build up of hydraulic head on the bottom of the landfill. The plan should provide details of the leachate storage facilities on site, and an evaluation of leachate disposal options. This plan shall provide for an annual evaluation of leachate management at the site to be included with the annual Self-Monitoring Reports as described in the attached Monitoring and Reporting Program. If recirculation of the leachate is to be considered, the discharger must demonstrate that the quantity of leachate being recirculated will not exceed a solid to liquid ratio of at least 5:1 using a moisture content of the solid waste of at least 30%.

5. The discharger shall submit by August 1, 1990, detailed design plans, acceptable to the Executive Officer, for an engineered alternative to siting criteria specified in Section 2530(c) of Subchapter 15, for the existing landfill area. The design plans for an engineered alternative shall satisfy the exemption requirements as outlined in Section 2510 of Subchapter 15.

6. The discharger shall submit evidence of an irrevocable closure fund, acceptable to the Executive Officer pursuant to Section 2580(f) of Subchapter 15, by October 1, 1990, that will provide sufficient funds to properly close the landfill and for the post-closure monitoring and maintenance of the site. The duration of the post-closure monitoring and maintenance period will be a minimum of 30 years unless specified otherwise by the Executive Officer.

7. The discharger shall submit by October 1, 1990, a detailed workplan proposal for construction, maintenance, operation and closure of the expansion landfill in accordance with the specifications outlined in Subchapter 15. This workplan proposal shall include a slope stability analysis for the expansion landfill.

8. The discharger shall submit a report, acceptable to the Executive Officer, which includes a detailed evaluation of the potential impacts which the Alameda County Water District's Salinity Barrier Project will have on the hydrogeologic conditions within the shallow water bearing zones and the Newark Aquifer at the site. The report shall discuss the effects that the water district's hydrualic barrier project will have on the discharger's ground water monitoring program, and shall be submitted within 90 days of issuance of the Environmental Impact Report for the Salinity Barrier Project.

9. The discharger shall submit, by April 18, 1991, a report on the groundwater quality at the site that evaluates the background concentrations of applicable water quality indicator parameters and develops Water Quality Protection Standards for the constituents listed in Specification B.9 of this Order, according to the requirements of Article 5 of Subchapter 15. If it is determined that the statistical comparison requirements of Article 5 are impractical the report should include a proposal, pursuant to Section 2510(b) of Subchapter 15, for an alternative comparison procedure. If the Executive Officer approves an alternative statistical method, self-monitoring reports shall present the results of the alternative statistical method in conjunction with the results of Cochran's Approximation to the Behrens-Fisher Students' T-Test analysis.

10. The discharger shall achieve full compliance with Section 2530(c) of Subchapter 15 by July 1, 1991 according to the engineered alternative plan discussed in Provision 5 as approved by the Executive Officer.

11. The discharger shall file with the Regional Board quarterly self-monitoring reports performed according to any self-monitoring program issued by the Executive Officer.

12. The discharger shall submit, within 90 days after closure of any portion of the landfill, a closure certification report which documents that the area has been closed according to the requirements of this Order and Subchapter 15.

13. All reports pursuant to these Provisions shall be prepared under the supervision of a registered civil engineer or certified engineering geologist.

14. The discharger shall comply with all applicable provisions of Subchapter 15 that are not specifically referred to in this Order.

15. The discharger shall remove and relocate any wastes which are discharged at this site in violation of these requirements.

16. The discharger shall file with this Board a report of any material change or proposed change in the character, location, or quantity of this waste discharge. For the purpose of these requirements, this includes any proposed change in the boundaries of the disposal areas or the ownership of the site.

17. The discharger shall maintain a copy of this Order at the site so as to be available at all times to site operating personnel.

18. This Board considers the property owner and site operator to have continuing responsiblity for correcting any problems which arise in the future as a result of this waste discharge or related operations.

19. The discharger shall maintain all devices or designed features installed in accordance with this Order such that they continue to operate as intended without interuption except as a result of failures which could not have been reasonably foreseen or prevented by the discharger.

20. The discharger shall permit the Regional Board or its authorized representitive, upon presentation of credentials:

    a. Entry upon the premises on which wastes are located or in which any required records are kept.

    b. Access to copy any records required to be kept under the terms and conditions of this Order.

    c. Inspection of any treatment equipment, monitoring equipment, or monitoring method required by this Order.

    d. Sampling of any discharge or groundwater covered by this Order.

21. This Board's Order Nos. 79-21 and 84-7 are hereby rescinded.

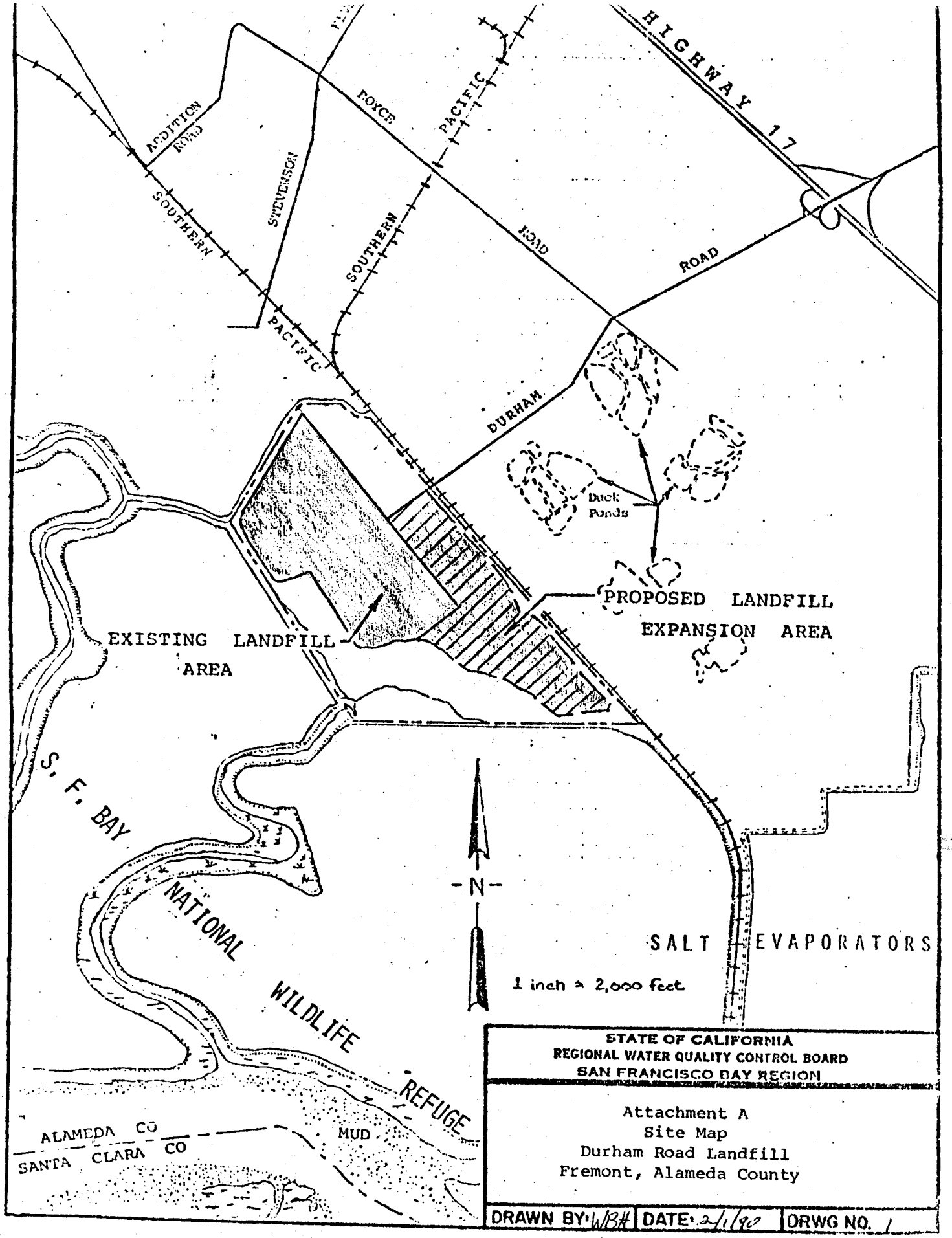
22. These requirements do not authorize commission of any act causing injury to the property of another or of the public; do not convey any property rights; do not remove liability under Federal, State of Local laws; and do not authorize the discharge of wastes without appropriate permits from other agencies or organizations.

23. This Order is subject to Board review and updating, as necessary, to comply with changing State or Federal laws, regulations, policies, or guidelines; changes in the Board's Basin Plan; or changes in the discharge characteristics, in five year increments from the effective date of this Order.

I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing is a full, complete, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on April 18, 1990.

Steven R. Ritchie
Executive Officer

Attachments: A) Site map
B) Self Monitoring Program



STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

Attachment A
Site Map
Durham Road Landfill
Fremont, Alameda County

DRAWN BY: WBH	DATE: 2/1/90	DRWG NO. 1

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

WASTE MANAGEMENT INC. OF NORTH AMERICA

DURHAM ROAD LANDFILL

FREMONT, ALAMEDA COUNTY

ORDER NO. 90-051

CONSISTS OF

PART A

AND

PART B

PART A

A. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No.73-16. This Self-Monitoring Program is issued in accordance with Provision C.11 of Regional Board Order No. 90-051.

The principal purposes of a self-monitoring program by a waste discharger are: (1) to document compliance with waste discharge requirements and prohibitions established by the Board, (2) to facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge, (3) to develop or assist in the development of effluent standards of performance, pretreatment and toxicity standards, and other standards, and (4) to prepare water and wastewater quality inventories.

B. SAMPLING AND ANALYTICAL METHODS

Sampling

Sample collection, storage, and analyses shall be performed according to most recent version of Standard Methods for the Analysis of Wastewater and in accordance with an approved sampling and analysis plan.

Water and waste analysis shall be performed by a laboratory approved for these analyses by the State Department of Health. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Regional Board.

All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

C. DEFINITION OF TERMS

1. A grab sample is a discrete sample collected at any time.

2. A composite sample is a sample composed of individual grab samples mixed in proportions varying not more than plus or minus five percent from the instantaneous rate of waste flow corresponding to each grab sample collected at regular intervals not greater than one hour, or collected by the use of continuous automatic sampling devices capable of attaining the proportional accuracy stipulated above throughout the period of discharge or 24 consecutive hours, whichever is shorter.

3. Receiving waters refers to any water which actually or potentially receives surface or groundwaters which pass over, through, or under waste materials or contaminated soils. In this case the groundwater beneath and adjacent to the landfill, the surface runoff from the site, the drainage ditches surrounding the site, Mowry Slough and Albrae Slough are considered the receiving waters.

4. Standard observations refer to:

   a. Receiving Waters

      1) Floating and suspended materials of waste origin: presence or absence, source, and size of affected area.

      2) Discoloration and turbidity: description of color, source, and size of affected area.

      3) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.

      4) Evidence of beneficial use: presence of water associated wildlife

      5) Flow rate.

      6) Weather conditions: wind direction and estimated velocity, total precipitation during the previous five days and on the day of observation.

   b. Perimeter of the waste management unit.

      1) Evidence of liquid leaving or entering the waste management unit, estimated size of affected area and flow rate. (Show affected area on map)

      2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.

      3) Evidence of erosion and/or daylighted refuse.

   c. The waste management unit.

      1) Evidence of ponded water at any point on the waste management facility.

      2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.

      3) Evidence of erosion and/or daylighted refuse.

4) Standard analysis and measurements refer to:

a. pH
b. Electrical Conductivity (EC)
c. Total Dissolved Solids (TDS)
d. Total Phenols
e. Chloride
f. Total Organic Carbon
g. Nitrate Nitrogen
h. Total Kjeldahl Nitrogen
i. Water elevation in feet above Mean Sea Level
j. Settleable Solids, ml/l/hr
k. Turbidity, NTU
l. EPA Method 624, identifying all peaks greater than 1 microgram/liter.

D. SCHEDULE OF SAMPLING, ANALYSIS, AND OBSERVATIONS

The discharger is required to perform sampling, analysis, and observations according to the schedule specified in Part B, and the requirements in Article 5 of Subchapter 15.

E. RECORDS TO BE MAINTAINED

Written reports shall be maintained by the discharger, and shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Board. Such records shall show the following for each sample:

1. Identity of sample and sample station number.

2. Date and time of sampling.

3. Date and time that analyses are started and completed, and name of the personnel performing the analyses.

4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used. A reference to a specific section of a reference required in Part A Section B is satisfactory.

5. Calculation of results.

6. Results of analyses, and detection limits for each analyses.

F. REPORTS TO BE FILED WITH THE BOARD

1. Written self-monitoring reports shall be filed by the 15th day of the month following the report period. In addition an annual report shall be filed as indicated in F.2. The reports shall be comprised of the following:

   a. Letter of Transmittal

      A letter transmitting the essential points in each self-monitoring report should accompany each report. Such a letter shall include a discussion of any requirement violations found during the last report period, and actions taken or planned for correcting the violations, such as, operation and/or facilities modifications. If the discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to the corespondence transmitting such schedule will be satisfactory. If no violations have occurred in the last report period this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting the monitoring reports shall be signed by a principal executive officer at the level of vice president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.

   b. Each monitoring report shall include a compliance evaluation summary sheet. This sheet shall contain:

      1) The sample mean and the sample variance for all sample sets taken from all compliance points, and shall determine if the difference between the mean of each sample set and the water quality protection standard is significant at the 0.05 level using Cochran's Approximation to the Behrens-Fisher Student's t-test as described in Appendix II of Subchapter 15. The discharger may propose an alternative statistical procedure to be used in making this determination pursuant to Section 2555(h)(3) of Subchapter 15. If a statistically significant difference is found this shall be reported as a suspected requirement violation in the letter of transmittal.

      2) A graphic description of the velocity and direction of groundwater flow under/around the waste management unit, based upon the past and present water level elevations and pertinent visual observations.

      3) The method and time of water level measurement, the type of pump used for purging, pump placement in the well; method of purging, pumping rate, equipment and methods used to monitor field pH, temperature, and conductivity during purging, calibration of the field equipment, results of the pH, temperature conductivity and turbidity testing, well recovery time, and method of disposing of the purge water.

4) Type of pump used, pump placement for sampling, a detailed description of the sampling procedure; number and description of equipment, field and travel blanks; number and description of duplicate samples; type of sample containers and preservatives used, the date and time of sampling, the name and qualifications of the person actually taking the samples, and any other observations;

c. A map or aerial photograph shall accompany each report showing observation and monitoring station locations.

d. Laboratory statements of results of analyses specified in Part B must be included in each report. The director of the laboratory whose name appears on the laboratory certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Board.

1) The methods of analyses and detection limits must be appropriate for the expected concentrations. Specific methods of analyses must be identified. If methods other than EPA approved methods or Standard Methods are used, the exact methodology must be submitted for review.

2) In addition to the results of the analyses, laboratory quality control/quality assurance (QA/QC) information must be included in the monitoring report. The laboratory QA/QC information should include the method, equipment and analytical detection limits; the recovery rates; an explanation for any recovery rate that is less than 80%; the results of equipment and method blanks; the results of spiked and surrogote samples; the frequency of quality control analysis; and the name and qualifications of the person(s) performing the analyses.

e. An evaluation of the effectiveness of the leachate monitoring/ control facilities.

f. A summary and certification of completion of all standard observations for the waste management unit, the perimeter of the waste management unit, and the receiving waters.

g. The quantity and types of wastes disposed of during the past quarter, and the locations of the disposal operations.

2. CONTINGENCY REPORTING

A. A report shall be made by telephone of any seepage from the disposal area immediately after it is discovered. A written report shall be filed with the Board within five days. This report shall contain the following information:

1) a map showing the location(s) of discharge;
2) approximate flow rate;
3) nature of effects; i.e. all pertinent observations and analyses; and
4) corrective measures underway or proposed.

B. A report shall be made in writing to the Board within seven days if a statistically significant difference is found between a self-monitoring sample set and a WQPS. Notification shall indicate what WQPS(s) have been exceeded. The discharger shall immediately resample at the compliance point(s) where this difference has been found and analyze another sample set of at least four portions split in the laboratory from the source sample.

C. If resampling and analysis confirms the earlier finding of a statistically significant difference between self-monitoring results and WQPS(s) the discharger must submit to the Board within 90 days an amended Report of Waste Discharge for establishment of a verification monitoring program meeting the requirements of Section 2557 of Subchapter 15. This submittal shall include the information required in Section 2556(b)(2) of Subchapter 15.

D. The discharger must notify the Board within seven days if the verification monitoring program finds a statistically significant difference between samples from the verification monitoring program point of compliance and the WQPS(s).

E. If such a difference or differences are found by the verification monitoring program, it will be concluded that the discharger is out of compliance with this Order. In this event the discharger shall submit within 180 days an amended Report of Waste Discharge requesting authorization to establish a corrective action program meeting the requirements of Section 2558 of Subchapter 15. This submittal shall include the information required in Section 2557(g)(3) of Subchapter 15.

3. By January 31 of each year the discharger shall submit an annual report to the Board covering the previous calendar year. This report shall contain:

a. Tabular and graphical summaries of the monitoring data obtained during the previous year.

b. A comprehensive discussion of the compliance record, and the corrective actions taken or planned which may be needed to bring the discharger into full compliance with the waste discharge requirements.

c. A map showing the area, if any, in which filling has been completed during the previous calendar year.

d. A written summary of the groundwater analyses indicating any change in the quality of the groundwater.

e. An evaluation of the effectiveness of the leachate monitoring/ control facilities.

4. A boring log shall be submitted for each sampling well established for this monitoring program, as well as a report of inspection or certification that each well has been constructed in accordance with the construction standards of the Department of Water Resources. These shall be submitted within 30 days after well installation.

Part B

1. DESCRIPTION OF OBSERVATION STATIONS AND SCHEDULE OF OBSERVATIONS

A. WASTE MONITORING

1. Record the total volume and weight of refuse in cubic yards and tons disposed at the site during the month. Report this information quarterly.

2. Record the volume of fill completed, in cubic yards, showing locations and dimensions on a sketch or map. Report this information quarterly.

B. ON-SITE OBSERVATIONS

STATION	DESCRIPTION	OBSERVATIONS	FREQUENCY
V-1 thru V-'n'	Located on the waste disposal area as delineated by a 500 foot grid network.	Standard observations for the waste management unit.	Weekly
P-1 thru P-'n' (perimeter)	Located at equidistant intervals not exceeding 1000 feet around the perimeter of the waste management unit.	Standard observations for the perimeter.	Weekly

C. GROUND WATER MONITORING

STATION	DESCRIPTION	OBSERVATION	FREQUENCY
1a, 3a, 4a, 6a, 7a, 9a, 12a,13a,14a, 15a,16a,G4,	Ground water monitoring wells, as shown on the attached site map.	Standard analysis other than "j".	Once per quarter.
M6	Ground water monitoring well associated with fuel tank leak, as shown on the attached map.	Standard analysis other than "j" and analysis for total petroleum hydrocarbons.	Once per quarter.
1c, 2c, 3c 4c, 5c, 6c	Ground water monitoring wells, as shown on the attached site map.	Standard analysis other than "J".	semi-annually
5a, 10a, 11a	Ground water monitoring wells designed to monitor the expansion area as shown on the attached site map.	Standard analysis other than "J".	semi-annually until filling commences in the expansion area, then once per quarter thereafter.

D. LEACHATE MONITORING

STATION	DESCRIPTION	OBSERVATION	FREQUENCY
LW-1, LW-2 LW-3 and LW-5	Leachate control facilities, as shown on the attached site map	Depth of leachate built up at base of land-fill, and volume removed. Elevation of leachate above Mean Sea Level.	Once each week and at time of removal.
		Standard analysis other than "j"	once per quarter

E. SEEPAGE MONITORING

STATION	DESCRIPTION	OBSERVATION/ ANALYSIS	FREQUENCY
S-1 thru S-'n' (seepage)	At any point(s) at which seepage is found occurring from the waste management unit.	Standard observations for the perimeter, and standard analysis other than "i".	Daily until remedial action is taken and seepage ceases.
R-001 (receiving waters, upstream)	Located in receiving waters 200 feet upstream from the upper-most point of seepage discharge(s).	Standard observation for receiving waters and standard analysis other than "i".	Daily, during a seepage event.
R-002 (receiving waters, downstream)	Located in receiving waters 200 feet downstream of seepage discharge(s).	Same as receiving waters upstream.	Daily during a seepage event.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in this Board's Order No. 90-051.

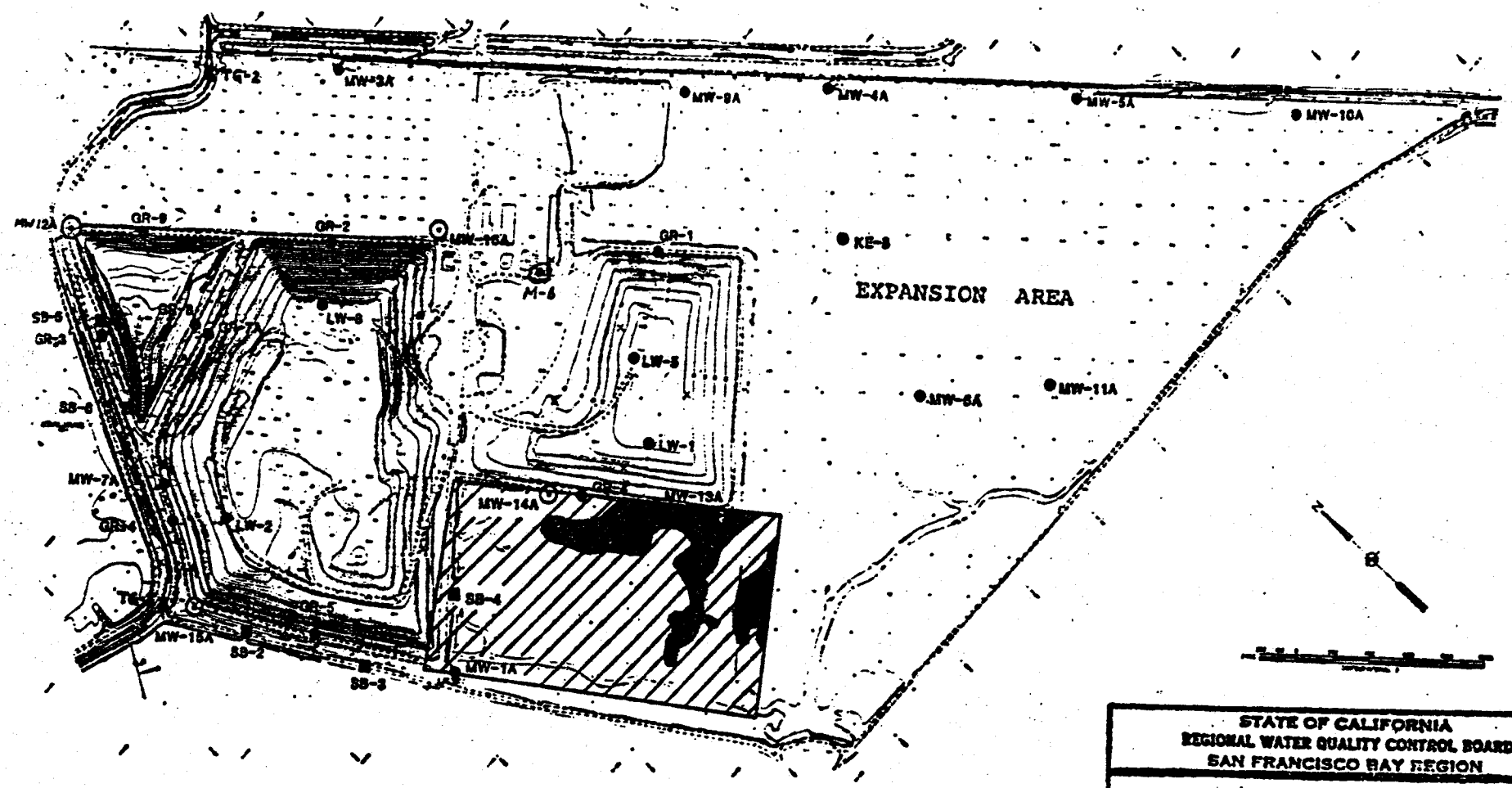
2. Is effective on the date shown below.

3. May be reviewed or modified at any time subsequent to the effective date, upon written notice from the Executive Officer, or request from the discharger.

Steven R. Ritchie
Executive Officer

April 18, 1990
Date Ordered

Attachment: Site Map



EXPLANATION

- ●MW-6A — Existing monitoring well, GR denotes leachate well
- ⊙MW-12A — New monitoring well
- ■ SB-4 — Soil borings
- Area of geophysical survey
- Area of low conductivity (more permeable lenses)

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

Self Monitoring Program
Monitoring Point Location Map
Durham Road Landfill
Fremont, Alameda County

DRAWN BY: WBH	DATE: 2/1/90	DRWG NO. 1